

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A directory server comprising:
a supplier server;
a consumer server in communication with the supplier server;
a plurality of pluggable services that manage replication of data contained within the directory server from the supplier server to the consumer server; and
a change log maintained on the consumer server of data replicated to the consumer server;
wherein replication of data is managed by the plurality of pluggable services using the change log, and
wherein the plurality of pluggable services comprises an incremental update algorithm service comparing a first replica update vector of the supplier server and a second replica update vector of the consumer server to order an update sequence from the change log.
2. (Original) The directory server of claim 1, further comprising:
a directory information tree copied between the supplier server and the consumer server;
wherein replication of data is managed by the plurality of pluggable services using the directory information tree.
3. (Original) The directory server of claim 1, further comprising:
a directory information subtree copied between the supplier server and the consumer server;
wherein replication of data is managed by the plurality of pluggable services using the directory information subtree.
4. (Original) The directory server of claim 2, wherein the plurality of pluggable services comprises a change sequence number service creating a unique combination of numbers used to determine ordering of an update operation for an attribute value in an entry in the directory information tree.

5. (Original) The directory server of claim 1, wherein the plurality of pluggable services comprises an update resolution procedure service determining ordering of operations by comparing a first change sequence number of the supplier server to a second change sequence number of the consumer server.
6. (Original) The directory server of claim 1, wherein the plurality of pluggable services comprises a replica update vector service determining a set of updates to be sent to a data replica by consulting a replica update vector for the consumer server.
7. (Original) The replication system of claim 6, wherein the replica update vector comprises a change sequence number for every data replica.
8. (Original) The directory server of claim 2, wherein the plurality of pluggable services comprises a replication agreement service comprising an entry in the directory information tree describing a relationship between the supplier server and the consumer server.
9. (Original) The directory server of claim 1, wherein the plurality of pluggable services comprises a server-initiated replication protocol service to store and update state information.
10. (Original) The replication system of claim 9, wherein state information comprises a uniqueid and a plurality of change sequence numbers for an entry.
11. (Canceled)
12. (Original) The directory server of claim 1, wherein the plurality of pluggable services comprises a uniqueid service assigning a unique identifier to an entry added by a client.

13. (Currently Amended) A method for replicating data in a directory server having a supplier and a consumer server, comprising:
determining a need to replicate data in the directory server;
using a plurality of services to manage replication of data contained within the directory server from the supplier server to the consumer server[;]], wherein the plurality of services comprises an incremental update algorithm service comparing a first replica update vector of the supplier server and a second replica update vector of the consumer server to order an update sequence from the change log;
maintaining a change log of data replicated to the consumer server; and
updating data replicated to the consumer server.
14. (Original) The method of claim 13, further comprising:
resolving conflicts of the replicated data using a time stamp to determine the consumer server holding the most recent version of the replicated data.
15. (Original) The method of claim 13, wherein replication of data is managed by the plurality of pluggable services using a directory information tree.
16. (Original) The method of claim 13 wherein replication of data is managed by the plurality of pluggable services using a directory information subtree.
17. (Original) The method of claim 13, wherein updating data is performed with an incremental update protocol.
18. (Original) The method of claim 13, wherein updating data is performed with a total update protocol.
19. (Original) The method of claim 15, wherein the plurality of services comprises a change sequence number service creating a unique combination of numbers used to determine ordering of an update operation for an attribute value in an entry in the directory information tree.

20. (Original) The method of claim 13, wherein the plurality of services comprises an update resolution procedure service determining ordering of operations by comparing a first change sequence number of the supplier server to a second change sequence number of the consumer server.
21. (Original) The method of claim 13, wherein the plurality of services comprises a replica update vector service determining a set of updates to be sent to a data replica by consulting a replica update vector for the consumer server.
22. (Original) The method of claim 21, wherein the replica update vector comprises a change sequence number for every data replica.
23. (Original) The method of claim 15, wherein the plurality of services comprises a replication agreement service comprising an entry in the directory information tree describing a relationship between the supplier server and the consumer server.
24. (Original) The method of claim 13, wherein the plurality of services comprises a server-initiated replication protocol service to store and update state information.
25. (Original) The method of claim 24, wherein state information comprises a uniqueid and a plurality of change sequence numbers for an entry.
26. (Original) The method of claim 13, wherein the plurality of services comprises an incremental update algorithm service comparing a first replica update vector of the supplier server and a second replica update vector of the consumer server to order an update sequence from the change log.
27. (Original) The method of claim 13, wherein the plurality of services comprises a uniqueid service assigning a unique identifier to an entry added by a client.

28. (Currently Amended) A method for replicating data in a directory server having a supplier and a consumer server, comprising:
determining a need to replicate data in the directory server;
using a plurality of services to manage replication of data contained within the directory server from the supplier server to the consumer server[;], wherein the plurality of services comprises an incremental update algorithm service comparing a first replica update vector of the supplier server and a second replica update vector of the consumer server to order an update sequence from the change log;
maintaining a change log of data replicated to the consumer server;
updating data replicated to the consumer server; and
resolving conflicts of the replicated data using a time stamp to determine the consumer server holding the most recent version of the replicated data.
29. (Currently Amended) An apparatus for replicating data in a directory server having a supplier and a consumer server, comprising:
means for determining a need to replicate data in the directory server;
means for using a plurality of services to manage replication of data contained within the directory server from the supplier server to the consumer server[;], wherein the plurality of services comprises an incremental update algorithm service comparing a first replica update vector of the supplier server and a second replica update vector of the consumer server to order an update sequence from the change log;
means for maintaining a change log of data replicated to the consumer server; and
means for updating data replicated to the consumer server.